

## Bomedemstat

## Chemical Properties

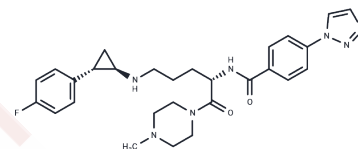
CAS No. : 1990504-34-1

Formula: C<sub>28</sub>H<sub>34</sub>FN<sub>7</sub>O<sub>2</sub>

Molecular Weight: 519.61

Storage: Keep away from moisture, Store at low temperature  
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Bomedemstat (IMG-7289), an orally active and irreversible lysine-specific demethylase 1 (LSD1) inhibitor, shows activity in mouse myeloproliferative neoplasm (MPN) models. This compound exhibits antineoplastic effects and can be used for acute myeloid leukemia (AML) and myelofibrosis (MF) research.
Targets(IC50)	Apoptosis, Histone Demethylase
In vitro	Bomedemstat (50 nM-1 μM, 96 hours) treatment of SET-2 cells increases survival and induces apoptosis via BCL-XL and PUMA in a TP53-dependent manner, leading to cell cycle arrest. [1]
In vivo	Once-daily treatment with IMG-7289 normalized or improved blood cell counts, reduced spleen volumes, restored normal splenic architecture, and reduced bone marrow fibrosis. Most importantly, LSD1 inhibition lowered mutant allele burden and improved survival [1]. Animal Model: Mx1cre-Jak2 V617F mice [1] Dosage: 45 mg/kg Administration: Administered daily by oral gavage for either 14, 42, or 56 consecutive days Result: In this Mx-Jak2V617F model of myeloproliferative neoplasm (MPN), mice developed severe splenomegaly (up to 10-fold increase in spleen weight). Splenic architecture was completely destroyed, eliminating demarcation of the white and red pulp. Treatment significantly reduced splenomegaly with a few treated mice normalizing their spleen weight. Remarkably, the 56-day course led to partial restoration of lymph follicles and spleen architecture by histological examination.

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.9245 mL	9.6226 mL	19.2452 mL
5 mM	0.3849 mL	1.9245 mL	3.849 mL
10 mM	0.1925 mL	0.9623 mL	1.9245 mL
50 mM	0.0385 mL	0.1925 mL	0.3849 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Jonas S Jutzi, et al. LSD1 Inhibition Prolongs Survival in Mouse Models of MPN by Selectively Targeting the Disease Clone. *Hemasphere*. 2018 Jun 8;2(3):e54.

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